



SEQUENCE LISTING

<110> WEI, Ming-Hui et al.

<120> ISOLATED HUMAN TRANSPORTER PROTEINS,  
NUCLEIC ACID MOLECULES ENCODING HUMAN TRANSPORTER PROTEINS,  
AND USES THEREOF

<130> CL000894

<140> US 09/691,219

<141> 2000-10-19

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1617

<212> DNA

<213> Homo sapiens

*A1*  
<400> 1

cgcggtaac agcacgaggg ggagcgcttgcacgcggag ccagagccgg agctgcagcc 60  
gcagcgggag ccggggggagtcaggggcccggaggccgg gcccggagtga ggcgcacctcg 120  
cggggccctc gggcggagggtggtgagcgcc acccggagtc cccgcgcgcaacttcaggc 180  
gcactcggcg gggcggctgcgcccggactcggcg cgggactgca tggaggccaa 240  
ggagaagcag catctgttgg acgcaggcccggcaatccggtcatacacgg gatctctgtg 300  
gcaggaaggg gctggctgga ttccctctggcc cccacctggcctggacttgc aggccattga 360  
gctggctgcccagagcaaccatcactgcca tgctcagaag ggtcctgaca gtcactgtga 420  
ccccaaagaag gggaaaggccc agcgcgcagctgtatgtagcc tctgcacatctgcctgtt 480  
catgatcgga gaagtcgttggtgggtacctggcacacagcttggctgtca tgactgacgc 540  
agcacacactgctcaactgactttgcagcatgctcatcagcttcttctccc tctggatgtc 600  
ctccccggcca gcccaccaaga ccatgaaccttggctggcagagactgaga tctttggagc 660  
cctggctctctgtactgtccatctggctcggtacgggggtatggctgtacc tggctgtgga 720  
gcccgcgtatcttggggactatgaaattgacggggggaccatgctgatca cgtcgccgtg 780  
cgctgtggctgtacatcaataatggggttgacccttcac cagtctggccatggcacag 840  
ccacggcacc accaaccagcaggaggagaa ccccaagcgtc cggactgccttcatccatgt 900  
gtatcgccac ttatgcaga gcatgggtgtctgtggca gcctatattttataacttcaa 960  
gcacaaatacaagtatgttag accccatctgacacccatctgttccatcc tggctctggg 1020  
gacaaccttgcacatccatgagatgtgtatctgggtgttgcggatggaa ccccaaggaa 1080  
cggtgacttc acagctgttc gtatctgtgtgtggtag aagccctgca 1140  
cagcctgcat atctgggcac tgacgggtggccagcctgttctgtctgtcc acatcgccat 1200  
tgctcagaat acagacgcccaggctgtgtgtggacagacagcc agcagccgccc tccaaggaa 1260  
gttccacttc cacaccgtacatccatccatgtcgaggactac tggaggacatggactg 1320  
tcaggcatgc cagggccctcagactgact gtcagccag gcaccaactggcatgaac 1380  
aggacctgca ggtggctgga ctgagttgtcccccaggccagccaggacttgccttacccc 1440  
agctgtgtta taaaccaggtcccccttcctgacctctgccc cactccaggaatggagctct 1500  
tcccagccctccatctgactacagccagggtgggactca gcccggataaaagctgtgtg 1560  
accctgaaaaaaa aaaaaaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aatgtt 1617

<210> 2

<211> 372

<212> PRT

<213> Homo sapiens

TECH CENTER 1600/2900

NOV 07 2002

RECEIVED

<400> 2

Met Glu Ala Lys Glu Lys Gln His Leu Leu Asp Ala Arg Pro Ala Ile  
1 5 10 15  
Arg Ser Tyr Thr Gly Ser Leu Trp Gln Glu Gly Ala Gly Trp Ile Pro  
20 25 30  
Leu Pro Arg Pro Gly Leu Asp Leu Gln Ala Ile Glu Leu Ala Ala Gln  
35 40 45  
Ser Asn His His Cys His Ala Gln Lys Gly Pro Asp Ser His Cys Asp  
50 55 60  
Pro Lys Lys Gly Lys Ala Gln Arg Gln Leu Tyr Val Ala Ser Ala Ile  
65 70 75 80  
Cys Leu Leu Phe Met Ile Gly Glu Val Val Gly Gly Tyr Leu Ala His  
85 90 95  
Ser Leu Ala Val Met Thr Asp Ala Ala His Leu Leu Thr Asp Phe Ala  
100 105 110  
Ser Met Leu Ile Ser Leu Phe Ser Leu Trp Met Ser Ser Arg Pro Ala  
115 120 125  
Thr Lys Thr Met Asn Phe Gly Trp Gln Arg Ala Glu Ile Leu Gly Ala  
130 135 140  
Leu Val Ser Val Leu Ser Ile Trp Val Val Thr Gly Val Leu Val Tyr  
145 150 155 160  
Leu Ala Val Glu Arg Leu Ile Ser Gly Asp Tyr Glu Ile Asp Gly Gly  
165 170 175  
Thr Met Leu Ile Thr Ser Gly Cys Ala Val Ala Val Asn Ile Ile Met  
180 185 190  
Gly Leu Thr Leu His Gln Ser Gly His Gly His Ser His Gly Thr Thr  
195 200 205  
Asn Gln Gln Glu Glu Asn Pro Ser Val Arg Ala Ala Phe Ile His Val  
210 215 220  
Ile Gly Asp Phe Met Gln Ser Met Gly Val Leu Val Ala Ala Tyr Ile  
225 230 235 240  
Leu Tyr Phe Lys Pro Glu Tyr Lys Tyr Val Asp Pro Ile Cys Thr Phe  
245 250 255  
Val Phe Ser Ile Leu Val Leu Gly Thr Thr Leu Thr Ile Leu Arg Asp  
260 265 270  
Val Ile Leu Val Leu Met Glu Gly Thr Pro Lys Gly Val Asp Phe Thr  
275 280 285  
Ala Val Arg Asp Leu Leu Leu Ser Val Glu Gly Val Glu Ala Leu His  
290 295 300  
Ser Leu His Ile Trp Ala Leu Thr Val Ala Gln Pro Val Leu Ser Val  
305 310 315 320  
His Ile Ala Ile Ala Gln Asn Thr Asp Ala Gln Ala Val Leu Lys Thr  
325 330 335  
Ala Ser Ser Arg Leu Gln Gly Lys Phe His Phe His Thr Val Thr Ile  
340 345 350  
Gln Ile Glu Asp Tyr Ser Glu Asp Met Lys Asp Cys Gln Ala Cys Gln  
355 360 365  
Gly Pro Ser Asp  
370

<210> 3

<211> 11101

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature  
<222> (1)...(11101)  
<223> n = A,T,C or G

<400> 3

cctgccacca tgcctggcta attttcttat ttttagtaga gacgagggtt tgccatgtt 60  
accaggctgg tctcgaactc ttgaccttag gtgatccgccc tgcctcagcc tcccaaagt 120  
ctgggattat aggcgtgagc cgccgcaccc agccaaacatt ttttaaatac taaaagtag 180  
aggaatagt tatagtgtac cccatttacc catcaacttag tttcaacagc tggtgacata 240  
tttatttctt ctataccagt accgtactct ccccaactggg attattttaa ggcaaaaccc 300  
agatgacatt ttatccctaa atactttaga taaaggtgtt ctttggaaaaa aatcataacc 360  
tcaggaccag cctggccaac atggtgaac cctgtctgtt ctaaaaatac aaaaattagc 420  
ttggcatggt cgtggcacc tgaatccca gctactcagg aagctgaggc aggagaatca 480  
cttgaatccg ggaagcagag attgcagtga gctgagattt cagtcgagcc tggcgacag 540  
agacagaaat gaaactctgt ctcaaaaaca aacaacaaa aaaaccacta tacataaaaa 600  
tgaacaatga tgccacaata gcaccagaga atttataaa tacagattcc cagggccctgc 660  
cccaagaccta ctgaatccctg gaaatattca ggctccacac ccagagattc tggttcgggtt 720  
ggtctgatgc agggacctgt aacctgcgtt gtaacacctt ctccaggtaa tgctgagcc 780  
gctgggtctc agagtagaca gacctggaga aaaccagggt gtctgaggtt ttccagaaga 840  
aaaccagagt ccagagaagc agagaggcac tcagtgagga cccaaggcaga gcgggtgcac 900  
ctcacatcct cactccgtt accccgtctc ctacaagatg agagactgaa agagccctt 960  
cctgtccca gtggtgtggg caagaggcct gcacccctga ctcttggctc tgtgaaaggc 1020  
catacccacc aagcctatgg tcctagcgtt aaagggtgtt ggggagacga attgaccaga 1080  
caggagggtc tccagcagct ttttctaca cagagggcac ctgtcagagg ccagcgtggg 1140  
ggccacaggc tcccccaatcc ccaagaaccc ccagggaaagg aggctgctt aagtgggtgg 1200  
ggcaccaagc tggccaggaa ggacagggtt tctccagcg gtaccaacac ggtggcacct 1260  
ccggcctgca tctcccaggc ttgttctgtt ggcttccctgg ggctcccagg agccgctgct 1320  
ggggagggga gaagggggtgg cagcagtggc agtggtcgtc tctgtccga tggtgactgc 1380  
cgatgacact gttctctgtt cgggtggaga caaagccggc cactccagat tctctgcgc 1440  
gcaggagagg aggactgtgc gctgctttag tggcgaggat gggtcgatca gtcccaaggc 1500  
gtccttagggg gagacactgc cccagcctga gggcggcgca gcccacccca ccccaggacc 1560  
ctccttagcag gaggacagga acgcaagccg acctcggggg gtctccggcc tgagagggga 1620  
acatgatcaa gcccaggga gcccggatc ggagggggca gacgcggccc cagtagcctc 1680  
tgagaccct cttccggggc aaggagccac attcctgccc tcgggaccac caaagcggat 1740  
ttctacaaac taaagtctgg aactttctgg cggcgaggcg ggcaccccg cgcggagag 1800  
ggggcgcagg cgtcaccccg tcctcactca gcaacacccca ggcgcggcgc cggcgaagg 1860  
ctggcagact tctcggggc ggcagggtggg ctccggggc cccatggggc caggcacagg 1920  
tgtgcggggc cacagccggg cttttcgtt ccggcgaccg cccccccttc cccgcgggct 1980  
tttgcacacg acgcggcgac ggcagcttca cacgggttgg cgagggccgg ataaagccgg 2040  
cggccgcggg ggcagcggc tgaccggaga cacggggagcg cttggcagcc ggagccagag 2100  
ccggagctgc agcccgagcg ggagccgggg gagctcaggc ggcgcaggag cggggccgg 2160  
gtgagcgcac ctcgggggc cttcgccggca ggtgggttag cgccaccccg agtcccgcgc 2220  
gcaacttca gggcgcactc ggcggggcgg ctgcggcgt gcccggactc ggcgcgggac 2280  
tgcacggggc ccaaggagaa gcaacttgc ttggacgcca ggcggcaat ccgtaaggc 2340  
gagagcctgg ggacggggcgg gaattttggc ggcagccgc gacacccctgc atttgcac 2400  
ctagcagtgg ttggtttgg ctgcggctt agctgggacc atgcaggagg ggtgggggtga 2460  
ggtagggaa cgaagataat gggctgtggc ccaaggagccg tctctccctt gggcgcagc 2520  
ccagatccctt accccctgccc gggggggggc tggggccggg ggatggggc ttccatgcc 2580  
tgagatccctt ccccccggcacttgc cttttggcc caggcagccg cggccgggg aggccctgt 2640  
tcccaagtgc gctggggggg gctgtctgtt ctcccttgc gtcgccttgc ttcccttcccc 2700  
gcgcgtccact ggacagcagc ccccttggcc gttttccagg gtcttcaccc cctctggcct 2760  
ctgaaggggcc cccggggggc ggactccat tccctatca tccctgtctg aatacaggct 2820  
tctcacctt ggtttgtcgat gtcggagcg tcttagcta tttttcccttggacacaag 2880  
gcttcacaga gaaatgggac tagactggc cttccattacc tcatctcaga gctgagcg 2940  
ccctctcttc ccctctggcc aggtcataca cggatctt cttttcccttggacacaag 3000  
ggattccctt gccccggaccc ggcctggact tgcaggccat tgcaggctt gcccagagca 3060  
accatcaactg ccatgcttag aagggtccctt acagtcactg tgaccccaag aaggggaaagg 3120

cccagcgcca gctgtatgta gcctctgcca tctgcctgtt gttcatgatc ggagaagtcg 3180  
 ttggtaagca cttttggc aattaaatgta agttggtgca tggatagact ggatgttccc 3240  
 agcaatactg acactaaaag ccccaattac tgaacacaca ctacagtaag cctttatata 3300  
 cacattatct gatgcaggc tcacaacaac ctgtgttctc acatgggtga cgttattctc 3360  
 cttaacttac agatgatgaa actgaggcac gttcaggta agtaacttgc caaagatcac 3420  
 gcacaactcg tagctaaggg aaggcctgaa ttcctagaag ggaagagcat ttactgagta 3480  
 tctgctatgt tttccagtc ctatttgaac ttgatgtgca cattcacccct ctaagtagat 3540  
 atttggtgcc catttcacag agagtggaaat tgaggctca gagagagtag gtcacttgc 3600  
 acgggtgtac agctcatggg tagagagatc ttgagccag aatgtcctc tccagagcct 3660  
 gtggctccc tgctgcacac acagtctgg gagccagctc tctggggag ctgataagga 3720  
 ccctccaccc tgcagggtgg tacctggcac acagcttggc tgcataact gacgcagcac 3780  
 acctgctcac tgactttgcc agcatgctca tcagcctt ctccctctgg atgtcctccc 3840  
 gcccagccac caagaccatg aactttggc ggcagagagc tggtgaggat cgcgtttgg 3900  
 ctggagatgg gttgagaga gagggtgggt tagaacaggg gttcttaggt ggctgtatg 3960  
 ggtggatccc cccttcctcc cctgagtgag gccaggaggg tgatctggat ggggaagag 4020  
 gatgtcaacc atggcctctg tcctctggg aatcctagtc tgatggggaa gcccctggcc 4080  
 cagtcatcca ggagctctca gtctgcagg aagcaaagtt gacccctta agaagtgcag 4140  
 tagccaagct tcaagaacaa atgacaatgg cattaacact gcacataact ctgtggatca 4200  
 gctctggggg gaggggaagg ccagcaaagg ctgctggaa atataggcct taacctctct 4260  
 tccggtcacc ctggactgca tcgtcacctt cctcttgtg ggagatggcc cagcctgtct 4320  
 tccccagaag cctcagtttta ctagctgaac aaaaggcaca tactttaata agttagcttc 4380  
 ttacatgta caaccaaaaa ggtggactca gatgtgact tattagttcc ttctagctct 4440  
 tacattccta gatatatgag ggggtgggta aggggcagcc ataccggccc atacccctc 4500  
 cagagcccaag tgggaccctg gcccctgactt tggggggag gtgggtgggg aggatcctga 4560  
 aggaaggggg aagactccctt agtccaggc ccatgccaag gtgggtgtt gggttgggtt 4620  
 ctccctcaga gatcttgggaa gcccctggct ctgtactgca catctgggtc gtgacggggg 4680  
 tactggtgta cctggctgtg gagcggctga tctctgggaa ctatgaaatt gacggggggaa 4740  
 ccatgctgat cacgtcgggc tgcgtgtgg ctgtgaacat catgtgagtg gggccccagt 4800  
 ttcctcgtc tcccctccctc tcacacccac acctatgtct gcttgcgg 4860  
 aagagactgt gccacttcc agcatacgtc acagggacag aacttccctt atggctcgag 4920  
 ctctggcacc tggAACACCTT gggcttacc ttggccctag gccaagaaca ctggagctg 4980  
 taaatcgag tcttcatcca ctctacccac tccctgatac atgtcagggaa ctggccctgg 5040  
 tggcttcata cctgaagtgg ggcgggaaaga ggcctgggt tgccaggagta gctgtcccta 5100  
 gggcagaac ccaagtcga aattggtctc agttagagac aatgggtgtc tcttcgggg 5160  
 tctttgttca gaggcctcag ttcccccattc tggacatgaa tggagtgaac tgacagtgc 5220  
 ctcccataatg ccctcctgct ctgagatttgc acactgtggc attgttgc ccaggctc 5280  
 cctggcatttgc ggcgtggcc ctatctctca tggctgtctg aaccaaggcc acgtgggtt 5340  
 gacttctcac atggccaaag agatcacaag gtttagggc ttgagatttt tgccctacaa 5400  
 gtggcttagt cctaataatggt gacccatc tgcgacccca gtgagccctt ggcttgc 5460  
 ccacttccat agaatggggt tgacccttca ccagtcggc catgggcaca gcccacggc 5520  
 caccacccag caggaggaga accccaggtt ccgagctgcc ttcatccatg tgatcggcga 5580  
 ctttatgcag agcatgggtg tccttagtggc agcctatatt ttataacttca aggtcagagc 5640  
 tgggacacag ggtgggggg gtggcagggg agttagacc acctgagttt actctctacc 5700  
 ggggtttctt ttcagatttgc agtccctcc cagttctagg gaaaagggtt gggagaggaa 5760  
 agaaacattt atccaataacc taccatgtt cagcacttct gatcctcaca acaacctgaa 5820  
 ggttaggtgg tagtggtttc tggatgtcag aaagggttgc tgacttgcac agtgcacac 5880  
 agccggtaaa gcatagagcc agattcaagc ctacgactgt gtgttgc 5940  
 atgcccata catagaggca gggagctgtt gtggaaagag gcaggcattt gctctgaagc 6000  
 ttggctctcc tccttgcattt ccatgtgaca ttggatgatgtt tgcttgc 6060  
 tcaatttccat ctttgcatttca atggggacgg atggcgatc agatggatc taagatggct 6120  
 ttttgcatttgc tccatgttca agtcccttgc gaaggagggg tggggaggaa ctgcattt 6180  
 ctgaactgtt gtcgttcattt tctgttgcattt cagatgttca ataaaggagca gaaaactggg 6240  
 aggcaggcc accggcaggc tcatgcccac ccagcagaga gagcacctt cccacgg 6300  
 gctgggtggg aggggagaag ggaagctgtt gtgttagatg gtgaacttca ggtctgc 6360  
 cctgtcttcc tgcaggccaga atacaagtat gtagacccca tctgcacccctt cgtcttctcc 6420  
 atccctggtcc tggggacaac cttgaccatc ctggagatg tgatcctgtt gttgatggaa 6480  
 ggttaacctgg gctttgtggc tccctttttt ctcttgcatttca agcgtcaatc 6540

atagggtatg tgtgtgtctg gggcatccta gcacatggc ggggagccag gatccggagc 6600  
 cccggcatag gctggaaaac ctcctgggc ccctggcgtg atcttgacat agaggctggg 6660  
 ctttcagggtg tggcagttcc tggaaaccgtc ccccaagcccg agtcttcct tccccctacc 6720  
 cctaagggtg ctcctctgc ctatgcagggt ggcttctggg ggacatctgt agcatctgga 6780  
 gctctccagc ctcctccat acacttcccc aggctctggc tgccttctct caggaagaga 6840  
 gaggggggtga ggattatgtc ttcatttgc aagggggca gactgaggct cagagaagga 6900  
 cagttagct tggacaaaagc tactgaatcc actgcagcgc aggcccttcc tacatctcg 6960  
 ggaccaaaca atgccacacc ctgtgggac atggctgtgc ttgtggggt tggagaacgg 7020  
 tcagtggtg agaatgatct ggtctccctt gaattacctt ttttttttct tttttttt 7080  
 tttgaaaca gggtcttgct ctgtcatcca agctagatg cagtggtgcc accaaggctc 7140  
 acccgagct tgacccctta ggctcaagta atcctctgc ctcagccctcc caagtagctg 7200  
 ggaccacagg cgcatgccac catgtctggc taactttaa atgtttgtag agatgggggg 7260  
 gggggggct cactatgtt ccctggctgg ttcgaactt ttgggctcaa gcaatcatct 7320  
 cacttcggcc tctcaaagtg ctggagttac agatgtgagc caccacacctt ggcctgcac 7380  
 ctggctttc ttatgtctca ggctgggtc ctgggcccann nnnnnnnntt cttcaaaaat 7440  
 atatttattt ggcagggtcg gtggctcaca cctgtatcc cagcaactgtg ggaggccgag 7500  
 gcaggcagat tacctgaggt caggagttca agaccagcct ggctaaacaca gtgaaaccct 7560  
 gtctctacca aaaataaaaaa aattagccgg gcgtggtgcc atgcgcctgt agtcccagct 7620  
 actcaggagg ctgaggcagg aataattgtc tgaaccaggg aggcagaggt tgcaagtggc 7680  
 caagatcact ccactgcact ccagcctggg tgacagagca agattccgtc tcaaaaaaaaa 7740  
 ccaaaaaata tatttatttga gcacctacta tggagtaggt gctgttttag gcaccaagga 7800  
 tactgtggta atcaaaggag actgtcctgc cctcatggag tgcattttt agaggagaa 7860  
 actgacaata agtacattca taaataattt cagtgttaag agtggagagg aaatacaaca 7920  
 gagtgtatgg gcagagaccc tgggaggtga aggccgcctc agacctgcag gccaagagg 7980  
 tcttccttga ggggatgaca cctgaggatc aggagccagc cctgcacccaa tggcaggcg 8040  
 tgggaggggt agttccctt agttccctt gtcccttgcc gtccctcaggg acccccaagg 8100  
 gcgttgactt cacagctgtt cgtatctgc tgctgtcggt ggaggggtt gaagccctgc 8160  
 acagcctgca tatctggca ctgacgggtt cccagcctgt tctgtctgtc cacatcgcca 8220  
 ttggtgagtg ctgggacac tcagggtgg gtggagaca ggcagccaaa ggcctagtgc 8280  
 catccccaaac gggtccaggt gaccccgat gtcacagtg cccatgcac aagcccgacc 8340  
 tcatgtctgatc tacttgatac gcattattcc atctgtatcag cacaatctca tttatccatg 8400  
 aagaaaactga ggctgggggtt ggggtggaaa gttacttgcc caggctttt cagctgtat 8460  
 atggcagtag gtggcagatt cctggccttta aggccagtgc tttaccagct ctttcaggca 8520  
 tgagccaggt ctgggctggg aggctacctg gcagaggaat ggaatctggg ggctctcca 8580  
 tggcatggt cccccatctt gttctgtgg ggatgggtt tgagatggg gctctgtatg 8640  
 gttccaaagg gccagagtaa atggcttccc ccgctgtgtc ctctggcccc ccagctcaga 8700  
 atacagacgc ccaggctgtg ctgaagacag ccagcagccg cctccaaggg aagttccact 8760  
 tccacaccgt gaccatccag atcgaggact actcgaggaa catgaaggac tgcaaggcat 8820  
 gcaggggccc ctcagactga ctgctcagcc aggccaccaac tggggcatga acaggacctg 8880  
 caggtggctg gactgagtg ccccccaggcc cagccaggac tttgcctacc ccagctgtgt 8940  
 tgtaaaccag gtcccttcc tgcctctgc cccactccag gaatggagct cttccagcc 9000  
 tcccatctga ctacagccag ggtgggact cagcgggtat aaagctgtg tgaccctgt 9060  
 ctccagctc ctggccagc tctggaaagg ctgtatggg gcctaatcc cagcaaatgt 9120  
 tctaccactc gcaggggcaa aggtggtagt ccacgggacg tccaaggggga ggctggcccc 9180  
 agcgcccca tactgcctgc ctcatgcccc attctcagcc tggctggcct ttgcctttat 9240  
 gaatctgagc ccctccatct gcctatagca ataggcacgg gggtagggac ctcacactc 9300  
 tcatttgagc ctccctgagg cagggagcca ggaggcacct gaggcctatc tgccttag 9360  
 tcacttcagc tatgagccaa atgttccctt tcctggaggg gagaggcttc ttacttagta 9420  
 agagacaggt ttccctttc ttatccctt cagctgtgtc aacacaaaaa acaactttgg 9480  
 cacagggtt gggcaggggg tagagagatt tcagctggg ttctgcacta acaggctcca 9540  
 agccccctgg cacttctgtt gcccgtggag tgcctccagg gattcagagt ctccagaaag 9600  
 atatggctgg gccaactctg ttgcctaccc ggcctgaccc agtcggagcc tgacatggg 9660  
 gagggaaagg gagacaagtg gggctgcact cggccagag gccagctagg agggaaaccg 9720  
 cagcttcctg gggcttgggt gtgaagatcc ctgacttagg ggtggctttt gtttacaaga 9780  
 tgcaagaggg gaaacccgtc cccgactcat cgagacaaca tgcctcaggta tcaggagtc 9840  
 ctgtgtcaca aggtctgtct ctgcattgt aagcaagtgc cttggcggag ctggcctctg 9900  
 cccccacagtc tcatctgtac accgacaggg ttgatgcctc ctcacaggg ttgagaacaa 9960

gagccagttg gccaagttacc tgggttggta gaagattgggt tactttacc atcctgggga 10020  
 cagggaactc tggcccgaa ggctgcctca ctgaggagtc aggtgggctt cccagccctcc 10080  
 ccagggcag tgctgagtt gtcttgactg ttctggccca aggtgggagg aggtggggtt 10140  
 ggtcaactgc ctcccactt aaatctctgt cttccatct gtgaaatgac ctctttgtgc 10200  
 ctcccagca ctgtcatctt gatgcctgt gttctaggta ggtgggtct tcagccctc 10260  
 caggtctgtg aaaagtctgt ggaaagcact ggcctggaga ggggtggggg gttctgggt 10320  
 ggtgctccat tccaccacaa tctcagggga ctcaacctcc cctacccaaac taccacccacc 10380  
 ccacccaagc catggcaggc cccaggaact tgatcctggg ctttgcgtt tgccaaagtcc 10440  
 ttacacccct ctcaagagac agtcattggc tggcactggg ggctcatgcc tgcaatccca 10500  
 gcaccttggg aggctgaggc aggcatgta cttgaggcca ggagttcgag accagcctgg 10560  
 ccaatatggc gaaacccat ttctactaaa aataaaaaaa ctaaccaggc gtggtggctt 10620  
 gtgcctgtaa tcccagctac tcgggaggct gaggcaggag aatcgcttga accggggagg 10680  
 cagaggttgc agtgagctga gatcacacca ctgcactcca gcctggcga cagagcgaga 10740  
 ctccagctta aaaaaaaaaa aaaaaaaaaa aaaaggagac catcaactgt gtcctgcatt 10800  
 cttagatg aaaaaacagg ctcagagggt gaatcgaaa cctgaagtca gacagccagt 10860  
 gcaggcagggt ctgggatttc tgcctcattt cggttagaccc tcctctacag cagggctgg 10920  
 gggcctgtcg gtctgcgtg cctgttggta caatacaaaac ccctgggacc agcagtgc 10980  
 gccccatggg tgaggacatg ccaaggcagt tcagtgtcct gggtgtcaca gctgtgattg 11040  
 gaaaggtgcc tcttcaccc ggctggccct ggcattccagc gcctcccca ccctgggaag 11100  
 g 11101

<210> 4  
 <211> 358  
 <212> PRT  
 <213> Rattus norvegicus

*Q1*  
 <400> 4  
 Ala Ser Arg Ser Phe Phe Gly Ala Leu Trp Lys Ser Glu Ala Ser Arg  
 1 5 10 15  
 Ile Pro Pro Val Asn Leu Pro Ser Val Glu Leu Ala Val Gln Ser Asn  
 20 25 30  
 His Tyr Cys His Ala Gln Lys Asp Ser Gly Ser His Pro Asn Ser Glu  
 35 40 45  
 Lys Gln Arg Ala Arg Arg Lys Leu Tyr Val Ala Ser Ala Ile Cys Leu  
 50 55 60  
 Val Phe Met Ile Gly Glu Ile Ile Gly Gly Tyr Leu Ala Gln Ser Leu  
 65 70 75 80  
 Ala Ile Met Thr Asp Ala Ala His Leu Leu Thr Asp Phe Ala Ser Met  
 85 90 95  
 Leu Ile Ser Leu Phe Ser Leu Trp Val Ser Ser Arg Pro Ala Thr Lys  
 100 105 110  
 Thr Met Asn Phe Gly Trp Gln Arg Ala Glu Ile Leu Gly Ala Leu Leu  
 115 120 125  
 Ser Val Leu Ser Ile Trp Val Val Thr Gly Val Leu Val Tyr Leu Ala  
 130 135 140  
 Val Gln Arg Leu Ile Ser Gly Asp Tyr Glu Ile Lys Gly Asp Thr Met  
 145 150 155 160  
 Leu Ile Thr Ser Gly Cys Ala Val Ala Val Asn Ile Ile Met Gly Leu  
 165 170 175  
 Ala Leu His Gln Ser Gly His Gly His Ser His Gly His Ser His Glu  
 180 185 190  
 Asp Ser Ser Gln Gln Gln Asn Pro Ser Val Arg Ala Ala Phe Ile  
 195 200 205  
 His Val Val Gly Asp Leu Leu Gln Ser Val Gly Val Leu Val Ala Ala  
 210 215 220  
 Tyr Ile Ile Tyr Phe Lys Pro Glu Tyr Lys Tyr Val Asp Pro Ile Cys  
 225 230 235 240

Thr Phe Leu Phe Ser Ile Leu Val Leu Gly Thr Thr Leu Thr Ile Leu  
245 250 255  
Arg Asp Val Ile Leu Val Leu Met Glu Gly Thr Pro Lys Gly Val Asp  
260 265 270  
Phe Thr Thr Val Lys Asn Leu Leu Leu Ser Val Asp Gly Val Glu Ala  
275 280 285  
Leu His Ser Leu His Ile Trp Ala Leu Thr Val Ala Gln Pro Val Leu  
290 295 300  
Ser Val His Ile Ala Ile Ala Gln Asn Val Asp Ala Gln Ala Val Leu  
305 310 315 320  
Lys Val Ala Arg Asp Arg Leu Gln Gly Lys Phe Asn Phe His Thr Met  
325 330 335  
Thr Ile Gln Ile Glu Ser Tyr Ser Glu Asp Met Lys Ser Cys Gln Glu  
340 345 350  
Cys Gln Gly Pro Ser Glu  
355